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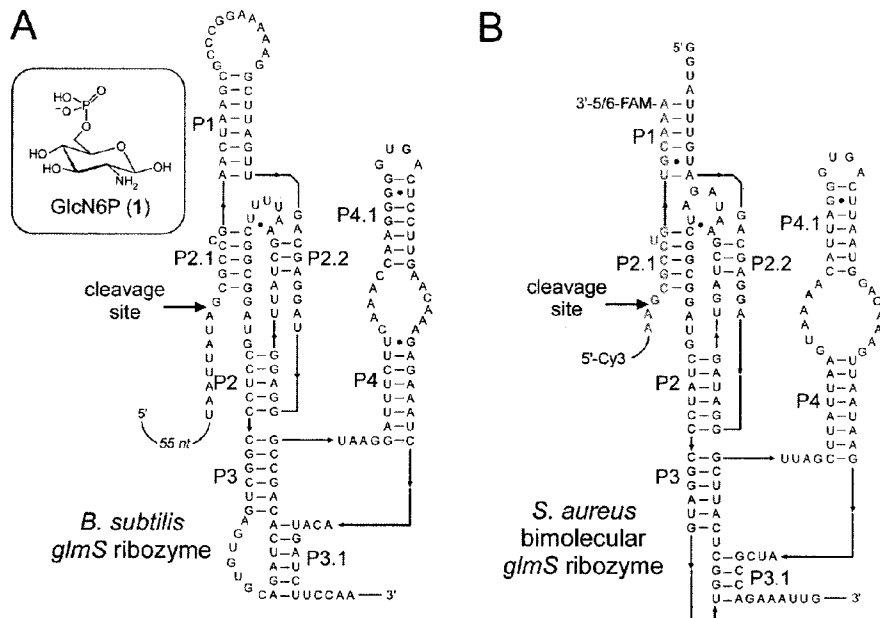
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[Continued on next page]

(54) Title: METHODS AND COMPOSITIONS RELATED TO THE MODULATION OF RIBOSWITCHES



(57) Abstract: Disclosed herein are methods and compositions related to the detection of conformational changes and interactions with trigger molecules in riboswitches.

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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. C12Q1/25 G01N33/542

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C12Q G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, EMBASE, WPI Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2004/027035 A (UNIV YALE [US]) 1 April 2004 (2004-04-01) page 4, line 22 - page 5, line 5 page 43, line 31 - page 44, line 19 pages 57-58, paragraphs F, G, H; page 79, paragraph A page 81, line 19 - page 83, line 2 figure 10	1-26
P,X	BLOUNT K ET AL: "DEVELOPMENT AND APPLICATION OF A HIGH-THROUGHPUT ASSAY FOR GLMS RIBOSWITCH ACTIVATORS" RNA BIOLOGY, LANDES BIOSCIENCE, GEORGETOWN, TX, US, vol. 3, no. 2, 2006, pages 77-81, XP008072343 ISSN: 1547-6286 the whole document	1-26

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 00/26226 A (UNIV YALE [US]; BREAKER RONALD R [US]; SOUKUP GARRETT A [US]) 11 May 2000 (2000-05-11) the whole document -----	1-26
A	DESAI S K ET AL: "Genetic screens and selections for small molecules based on a synthetic riboswitch that activates protein translation" JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US, vol. 126, 2004, pages 13,247-13,254, XP002982412 ISSN: 0002-7863 the whole document -----	1-26
A	BARRICK JEFFREY E ET AL: "New RNA motifs suggest an expanded scope for riboswitches in bacterial genetic control" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, vol. 101, no. 17, 27 April 2004 (2004-04-27), pages 6421-6426, XP002450913 ISSN: 0027-8424 the whole document -----	1-26
A	WINKLER W C ET AL: "Control of gene expression by a natural metabolite-responsive ribozyme" NATURE, NATURE PUBLISHING GROUP, LONDON, GB, vol. 428, no. 6980, 18 March 2004 (2004-03-18), pages 281-286, XP002410184 ISSN: 0028-0836 the whole document -----	1-26

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2006/062494

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.

2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-26

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-26

A method comprising a) bringing into contact a ribozyme riboswitch, a substrate labeled with a conformation dependent label and a compound, wherein the substrate is a substrate for cleavage by the ribozyme riboswitch; and (b) detecting change in fluorescence, wherein a change in fluorescence indicates cleavage of the substrate by the ribozyme riboswitch

2. claims: 27-45

a method comprising a) bringing into contact a riboswitch, a fluorescent trigger molecule and a compound; and (b) detecting change in fluorescence, wherein a change in fluorescence indicates displacement of the trigger molecule from the riboswitch

3. claims: 46-65

a method comprising (a) bringing into contact a riboswitch and a compound, wherein the riboswitch comprises a conformation dependent label; and (b) detecting change in fluorescence, wherein a change in fluorescence indicates a change in conformation of the riboswitch

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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